

REMARKS/ARGUMENTS

Claims 7-19, 21, and 25-28 are pending. Minor editorial changes have been made to some claims for clarity and Claims 22-24 have been cancelled as redundant. New Claims 25-28 find support on pages 1, 3 and 27 of the specification and in Tables 1-4 on pages 35, 38, 41 and 44. More specifically, Claims 25 and 26 find support in Tables 1-4 which describe particular adhesiveness or discoloration characteristics and on pages 31-32 of the specification which disclose adhesiveness and discoloration assays. Accordingly, the Applicants do not believe that any new matter has been introduced. Should the new method claims be withdrawn from consideration, the Applicants respectfully request that they be rejoined upon an indication of allowability for Claim 7 from which they depend. Favorable consideration and allowance of this application is now respectfully requested.

Rejection—35 U.S.C. §102

Claims 7-13, 15-18 and 21-24 were rejected under 35 U.S.C. 102(b) as being anticipated by Smith, Jr., U.S. Patent No. 5,399,343. Smith, Jr. does not anticipate the present invention, because it does not disclose a composition which contains not only polymerizable monomers (b) and (c), but also the antibacterial salt compound.

Smith, Jr. discloses cosmetic and body preparations which contain antimicrobial polymers that contain polymers having carboxyl groups which have been wholly or partially neutralized or exchanged with quaternary ammonium cations (column 1, lines 10-16) and discloses that the antimicrobial polymer can be prepared by the process (I) or (II):

- (I): a process wherein a carboxyl-containing polymer is subjected to a reaction with a biocidal quaternary ammonium salt in a continuous phase (column 3, lines 29-34 and column 7, lines 47-48),

(II): a process wherein a carboxyl-containing polymer is subjected to a neutralization with sodium ions and then to a treatment with an antimicrobial quaternary ammonium salt (column 4, lines 9-13 and column 7, lines 38-39).

The polymerizable monomers for the carboxyl-containing polymer according to process (I), are disclosed as an ethylenically unsaturated polymerizable monomers having a salt forming or salt group therein, such as salts of polymerizable carboxylic acid with an amine (e.g. triethylamine), and an alkanol ester of (meth)acrylic acid (column 3, line 50 to column 4, line 8).

The polymerizable monomers for the carboxyl-containing polymer according to the process (II), are disclosed as an α , β -ethylenically unsaturated carboxylic acid, such as acrylic acid, an olefin, such as ethylene, and a termonomer, such as methyl methacrylate (column 4, lines 26-66).

However, unlike the present invention, the process of Smith, Jr. requires that (1) the polymerizable monomers, including an unsaturated polymerizable monomer having carboxyl group or its salt form, are polymerized to prepare a carboxyl-containing polymer and then (2) the carboxyl-containing polymer (optionally after subjected to a neutralization with sodium ion) is reacted with the antimicrobial quaternary ammonium salt.

In other words, Smith, Jr., never discloses a composition containing at the same time both the polymerizable monomer and the antimicrobial quaternary ammonium salt. Therefore, Smith, Jr. does not anticipate the composition of the present invention which contains not only the polymerizable monomers (b) and (c), but also the antibacterial salt compound. Accordingly, the Applicants respectfully request that this rejection be withdrawn.

Rejection—35 U.S.C. §102

Claims 7-19 and 21-24 were rejected under 35 U.S.C. 102(b) as being anticipated by Vermeer, U.S. Patent No. 5,624,906. Vermeer does not anticipate the present invention because it does not disclose the polymerizable monomers--elements (b) and (c)—required by independent Claim 7.

While the Official Action (page 3, lines 9-10) indicates that Vermeer discloses “calcium carbonate or *acrylate* and mixtures thereof (column 17, lines 26, 45, 48)”, Vermeer does not disclose an “acrylate” monomer. Col. 17, line 45 does refer to an abrasive polishing agent that may be selected from a group including polymethacrylate and polymethylmethacrylate, but these compounds are polymers and not monomers.

Moreover, there is no suggestion in Vermeer to include polymerizable monomers in the composition, e.g., to form a polymerized film on a tooth. Vermeer is directed to an oral hygiene composition, e.g. a mouthwash or toothpaste (col. 1, lines 14-25) which is used to rinse or clean the mouth or teeth. The Vermeer composition contains a heteroatom containing alkyl aldnamide compound of the specific formula (column 10, lines 16-62), however, there is no disclosure or suggestion for a composition containing polymerizable monomers that would adhere to surfaces in the mouth. Clearly, Vermeer does not disclose or suggest a mouthwash or toothpaste which sticks to the teeth or other mouth surfaces. Thus, there is no suggestion in Vermeer for including a polymerizable monomer at all.

While Vermeer, discloses a wide variety of ingredients which can be used in an oral hygiene composition-- water, calcium carbonate and/or polymethacrylate as an abrasive polishing agent, cetylpyridinium chloride as an antibacterial agent, a mixture of sodium acetate and acetic acid, succinic acid as a chelating or sequestering agent (builder), and sodium hydroxide as a pH-control agent (column 16, lines 48-49; column 16, line 65 to column 17, line 7; column 17, lines 25-26; column 17, line 45; column 36, line 27; column

36, line 43; column 38, lines 24-39; column 39, line 23; and column 41, line 23)—there simply is no disclosure of the polymerizable monomers required by the present invention. Moreover, unlike the claimed composition (page 1 and page 19, lines 6-*et seq.*) the method of producing the Vermeer oral hygiene composition (col. 45, lines 58-col. 46, line 14) merely involves mixing the different ingredients with water and does not contemplate production of a solution that can be cured and can adhere to dental surfaces, such as teeth.

Since Vermeer does not disclose or suggest all the elements of claim 7, such as the polymerizable monomers (b) and (c), it cannot anticipate the present invention. Accordingly, the Applicants respectfully submit that this rejection may now also be withdrawn.

CONCLUSION

In view of the above amendments and remarks, the Applicants submit respectfully that this application is ready for allowance. Early notification of such is earnestly requested.

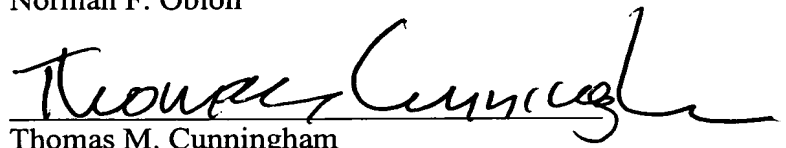
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